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The Impact of Finnish Health Sector Reforms

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Summary

The most important reform in Finnish health care in the last decade occurred at the beginning of 1993 as part of a broader change to the entire state subsidy system. This reform reduced central government control and increased the freedom of the municipalities in the provision of health services. In addition, an unusually severe economic recession in the early 1990s affected Finnish health care. Currently, the most important economic decisions in the health care system are made by the 444 municipalities, which decide annually the amount of money to be devoted to health care as well as dividing resources in different sectors within the area of health. The changes in measures of productivity (based on activity-based measures in output) in the system are more closely associated with direct economic constraints (of municipalities) than with changes in financial incentive structures. Studies on equity in utilisation indicate that the Finnish health care system met the challenges of the 1991–94 recession. Inequity in utilisation still prevails, however, and can be partly explained by the specific characteristics of the Finnish health care system. In future one needs to take more careful account of the rather unusual incentives that affect the behaviour of political decision-makers, providers and patients.

Key words: Health care reform, Finland

Contents

Introduction

In its institutional structure, financing and goals, the Finnish health care system is closest to those of other Nordic countries and the UK, in that it covers the whole population and its services are mainly produced by the public sector and financed through general taxation. The Finnish health care system can be described as one the most decentralised in the world. Even the smallest of the 444 municipalities (local government authorities) are responsible for arranging and taking financial responsibility for a whole range of "municipal health services". From an international perspective another unique characteristic of the system is the existence of another public finance scheme (the National Health Insurance-NHI-scheme), which reimburses partly the same services as the first, but also services which are provided by the private sector. In addition to subsidising the use of specific private health services, the NHI scheme also finances occupational and student health services and outpatient medicines.

The aim of this paper is to analyse the impact of Finnish health care changes. We start by describing the organisation and funding of the system, the goals of health care as well as the development of health care during recent decades. We will analyse in more depth changes in budget allocation and payment methods. The changes will be evaluated with respect to the stated objectives on the structure of health care, access and outcomes. Finally, the future of Finnish health care will be discussed whilst paying special attention to factors that in health economic literature have been seen as the means to achieve of an efficient and equitable health care system.

The structure of the Finnish health care system

Municipally provided services include primary and specialist health care. In addition, municipalities are responsible for other basic services, such as nursing homes and other social services for the elderly, child day care, social assistance and basic education. Municipal taxes, state subsidies and user charges finance the municipal health services (Figure 1).

Primary health care is mainly provided at health centres, which are owned by municipalities or federations of municipalities. Preventive care for communicable and non-communicable diseases, ambulatory, medical and dental care, an increasing number of outpatient specialised services, and various public health programs (e.g. maternity and school health care) are provided by the health centres. They also provide occupational health services and services for specific patient groups e.g. clinics for diabetes and hypertension clinics. Included with health centres are inpatient departments. The majority of patients in these departments are elderly and chronically ill, but in some municipalities, health centres also provide short-term acute curative inpatient services. In addition to the inpatient departments of health centres, long-term care is provided at homes for the elderly that administratively come under municipal social services.

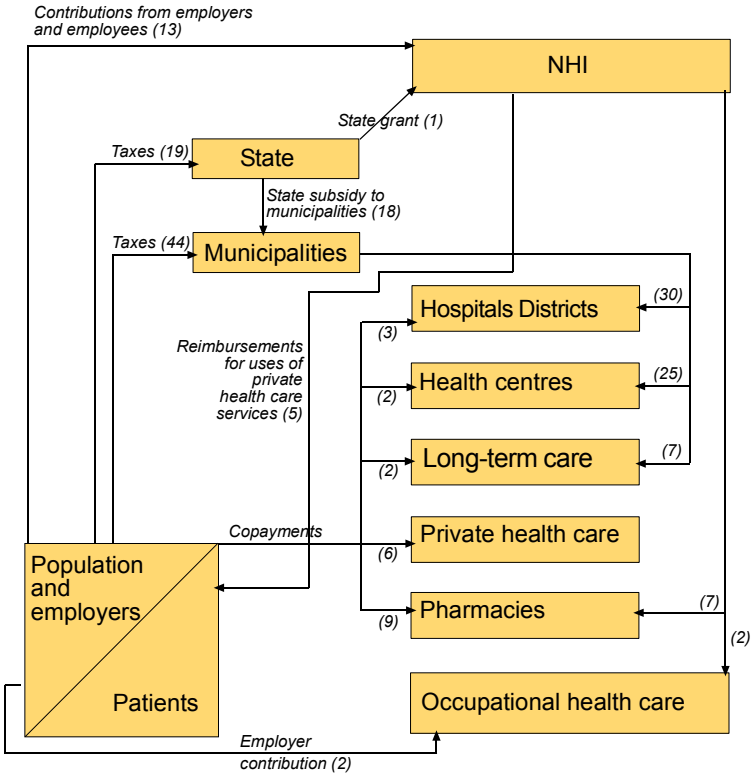

Figure 1. Financing flow chart in health care and long-term care. Percentages in parenthesis describe shares of flow of total expenditure/financing in 1999. Thus sums of percentages of arrows starting from population/employees and patients equal 100. The arrows ending at producers equal 95 since NHI reimbursements for uses of private health care services are paid to patients.

Specialist care (psychiatric and acute non-psychiatric) is provided by 21 hospital districts, which correspond to the federations of municipalities. Each municipality must be a member of a hospital district. In addition to services provided through health centres or hospital districts, municipalities may purchase services from a private provider.

The second public financing scheme, the NHI, covers its members (i.e., all Finnish residents including people who are not working) in the following fields: sickness allowances, maternity allowances, special care allowances, student health services, rehabilitation services, and medical expenses (drugs prescribed by a doctor, private-sector examinations and treatments performed or prescribed by a doctor or dentist, and transportation services). In addition, it partly reimburses employers for the costs of occupational health services.

Usually the NHI pays a certain percentage (50–75% depending on the services) in excess of a fixed sum, which is a minimum per purchase on medicines or established basic tariff in private sector physician or dental services and examinations and treatments. The Ministry of Social Affairs and Health (hereafter, the Ministry) decides the basic tariff.

Usually, actual fees exceed the basic tariff and thus in practice the refund is much lower than the original fixed percentage. Thus the NHI covers only a part of the expenses, and cost sharing is greater in the case of private services covered by the NHI than in that of municipally provided public services.[a] In special cases (registered individuals suffering from specified conditions), nearly all costs of medicines (75% or 100% in excess of a fixed minimum) are refunded.

The benefits of the NHI are financed mostly through compulsory contributions from insured persons i.e. population (1.5–3.2% of income in 2000) and employers (1.60% of wages in 2000). In principle, the NHI scheme is open-ended and the Government covers any deficit. Although the law defines the reimbursement system, the government and Ministry can to some extent effect the level of reimbursements by defining the basic tariffs and other details of the payment system.

In the municipal sector, the patient does not have the opportunity to choose the doctor who will treat him. As far as it is able, the hospital must allow the patient to choose the physician responsible for his care. In contrast, in a private physician practice covered by the NHI, patients can fix an appointment with a general practitioner, specialist or hospital of their own choice.

The scheme of municipal health services can be viewed as the major financial system in Finnish health care, since it provides about 70% of health services as measured by its share of expenditure. However, the share of municipal services varies from sector to sector. For example, in some outpatient specialist services (such as ophthalmology, obstetrics and gynaecology, and dental care) the private sector produces over half of the available services. Although the private sector produces about 5% of the total number of hospital inpatient admissions, its share in the case of certain surgical procedures (for instance cataract surgery) is high. Most private hospitals producing surgical procedures for private patients are for- profit organisations. There are also two not-for profit hospitals also providing services to patients paid for by municipalities. In addition, public hospitals have a “special payment category", under which patients paying an extra charge as supplementary remuneration for senior doctors may choose their attending doctor and in practice enjoy shorter waiting times for treatments, although this is not officially allowed. The additional charges are partly reimbursed by the NHI.

Use of private doctor services covered by the NHI is concentrated in higher socio-economic groups and varies geographically according to supply of services. It is highest in big towns and areas near public hospitals, since the services are mainly provided by doctors who have their permanent posts in municipal hospitals. The use of private services is also dependent on the supply to and waiting times in municipal health centres in the municipality. It has been quite popular among high income parents living in big cities to take out private insurance for their children covering the use of private services (i.e. in addition to the reimbursements of the NHI)([1, 2]

The aims and objectives

The publicly stated long-term objectives of Finnish health policy have always been to achieve the best possible health for citizens and to reduce disparities in the health of different social groups. Up to the 1970s, policy issues relating to the health care delivery system and the improvement of services mainly concerned building up the health service system and improving accessibility. Attention has long been paid to many public health issues, but in the 1980s, public policy became more closely focussed on the WHO's "Health For All" policy.

The Finnish national strategy "Health for All by the Year 2000" was released in 1986 after several years of preparation [3]. The objectives and policies of the strategy were confirmed in a Government report on health policy [4] and in the parliamentary debate on the report. In accordance with the WHO strategy, the objectives were divided into those concerning standards and those concerning distribution. As regards targets concerning standards, the following points were established: "adding years to life", i.e., reducing premature mortality; "adding health to life", i.e., lengthening a healthy and active life-span; and "adding life to years", i.e., striving for as a good a quality of life as possible. The targets for distribution meant that in the promotion of health, special attention is paid to reducing health inequalities between population groups. The promotion of healthy lifestyles, the reduction of avoidable health problems, and adequate development of the health services system became the main priorities of the strategy. In the current decade these ideas are still basic premises for health policy [5].

In the 1990s the most important official health policy document came from a Steering Group for the "Health for All by the Year 2000" strategy in 1993 [6]. The group identified seven health policy areas where new polices must be created in response to new challenges. These policy areas are: 1) reduction of inequalities in health between population groups (such as educational level, income etc.); 2) maintaining and improving the population's ability to cope; 3) improving co-operation that supports preventive health policy; 4) improving health care services from the point of view of economy and effectiveness; 5) training of health care staff; 6) health care management and; 7) participation by the public. In the Strategy for Social Policy issued by the Ministry of Social Affairs and Health in 1995, these targets remained unchanged [7].

The special aims associated with the delivery of health care were focussed on efficiency and equity. Efficiency (4^{th} policy area) is assumed to increase as a result of a change in the structure of care brought about by transferring resources from institutional care to outpatient services so that high-quality services are provided in a way that is reasonable from the point of view of economy. During the time of economic recession it was thought that "the volume of specialised care will be reduced, that is to say that we need to maintain the present level of services with smaller resources" [6] (p. 39). It was assumed that this would be achieved through competition so that "municipalities will buy services from where they get good services at a suitable price ". On the other hand, it was stated that the supply of local services within the field of primary health care must be increased. A population-based system (in which a team of doctors and nurses is responsible for the

health care of a geographically specified population) allowing more flexible arrangement as regards working hours is assumed to result in shorter queues and a better quality of work. Also, more co-operation within the social welfare sector is emphasised in the arrangement of health services for older persons.

Equity is defined in various ways in official documents: "The task of health care is to guarantee good care and treatment for everybody" [4]. "Priority must be given to the needs of the most disadvantaged individuals and groups and to ensuring social equity so that economic factors do not prevent the appropriate use of health services" [3]. There is also a wider aim to improve equality across different population groups in terms of health and economic status. The corresponding ideas are also to be found in the most recent official policy statements [8].

Development of the health care system

By the late 1970s, the basic elements of the health care system (i.e., health centres and a network of specialist hospitals) had been developed. The 1980s and the first years of the 1990s were used to undertake a rationalisation of the management of the health care system. In the beginning of the 1980s, the state subsidies to municipalities varied between various social and health services. For example, it was higher in health centres than in nursing homes, thus creating economic incentives for municipalities to develop certain sectors. The State Subsidy Act of 1984 equalised the state subsidy rates between the various services health and social services. The state subsidy rate now varied between 29 and 66% of the actual costs, depending on the financial capability of the municipality. The maximum level of user charges—which have almost always been the level charged in practice—was also set at the national level. In 1990 a new Hospital Act brought all municipal hospitals under the ownership and management of 21 Health Care Districts. The District is responsible for providing hospital services and co-ordinating the public specialised hospital care within its area.

The most important reform in Finnish health care in the last decade occurred in early 1993 as part of a reform of the entire state subsidy system. The main objective of the reform was to define the relationship between the state and the municipalities rather than to directly introduce major changes in health policy priorities. An essential element of the reform was the revision of the grounds for determining state subsidies to municipalities for health services. Under the old system, state subsidies to municipalities or federations of municipalities (producers) were earmarked and related to real costs. Under the reformed system, state subsidies for running costs in health services provided by municipalities are non-earmarked lump-sum grants, which are calculated prospectively by using a specific need-based capitation formula.

The aim of the reform was to reduce central government control and to increase local freedom in the provision of services. This made it possible for municipalities to adopt a more active role as a purchaser instead of acting in the mainly producer's role as previously. Particularly in the field of specialist hospital care, the reform meant that the system changed somewhat from a public integrated model to a public contract model.

The deregulatory part of the reform included dismantling a number of legal and administrative norms applying to the administration, personnel and user charges of municipalities and health care providers. It also extended the right of the municipalities to purchase services freely from public, not-for-profit and for-profit providers and informal carers, and to contract out existing public services.

Strong state regulation (such as a firm control over the personnel employed and the mix of personnel) changed to "softer regulation" or "information guidance" within the system. This relied on the assumption that the provision of information to municipalities, producers, and professionals (doctors) will drive constructive behavioural or system change. The information guidance included aspects such as: improving the statistical systems to allow more transparency concerning costs, outputs, accessibility and effectiveness of the different municipalities and service providers and comparisons between them ("benchmarking"); producing information to support "evidence-based" choices of effective technologies and practices in health care, creating a continuing education program aimed at more rational drug therapy; and developing national non-binding recommendations on personnel and other resource requirements and practices for service provision.

The reform gave the municipalities and hospital districts enormous freedom to organise, regulate and administer service provision. Under current legislation the power of the ministry is very weak, and it does not have effective means to affect decisions made at the local level. Since the mid 1990s the ministry has established a very large number of working parties and committees, and has also hired experts in order to co-ordinate municipal actions (on a voluntary basis) within the field of health care.

In recent years, local projects and experiments have emerged in quite different directions. These include developing in one hospital district a clearer purchaser-provider model in which smaller municipalities have formed co-operative purchaser organisations for arranging specialised services; a municipality buying its health services from the non-profit third sector; and an instance of the merging of health centres and a district hospital into a single organisation providing all health services for inhabitants of the municipalities in the area.

Despite quite radical decentralisation in the municipal health service, changes in the NHI scheme have been fairly minor. The general aim of reforms here has been to contain public expenditure. For example, the Finnish drug reimbursement system was revised in several ways during the 1990s in order to curtail the growth in NHI expenditure. The measures included demand side measures such as changes in fixed deductibles and percentages in cost sharing and price control.

Trends in health care expenditure and financing

In addition, the reforms in Finnish health care already mentioned were also affected by changes in the economic circumstances of the country. An unusually severe economic

recession started in 1991. The unemployment rate increased from 3% to 18% during the period 1990–93 (and was still as high as 8% in 2001). Per capita GDP (at constant prices) decreased by 15% in the space of these three years. Although some economic growth occurred during the two following years, in 1995 per capita GDP was below the figures of the late 1980s. Since the recession, GDP growth has been fairly rapid.

The changes in the Finnish economy and health care system are also reflected in the usual indicators. The proportion of GDP spent on health services increased from 6.4% to 9.3% during the period 1980–1992. By 2000, it had decreased to about the same level (6.6%) as in 1980; and in 2001 it rose to 7%.

In the 1980s, the increase in total health expenditure as a share of GDP was mainly due to a relatively greater increase in the volume of heath expenditure as compared to GDP. In the early 1990s, the increase in the share of GDP can be explained by a greater decrease in GDP (Figure 2), although in the first year of the recession (1991) there was a 1% increase in the volume of health care (as measured by health expenditure at constant prices). During the period 1991–94, the volume of health care per capita decreased by 15%. After this, GDP rose again, thereby further decreasing the proportion of GDP spent on health services. At constant prices, per capita health care expenditure reached the level of the early 1990s in 2001.

In Finland as in other countries expenditure on pharmaceuticals has increased more rapidly during the last decade than other health expenditure or GDP. Since 1990 the share of pharmaceutical expenditure (excluding hospital pharmaceutical expenditure) of health expenditure has increased from 9% to 16%. In addition, since 1990, the share of other private services covered by the NHI (private physician and dental services, occupational care and private examinations and treatments) of total expenditure has also somewhat increased (from 7% to 9%) whereas the share of municipal health services decreased (from 72% to 65%).

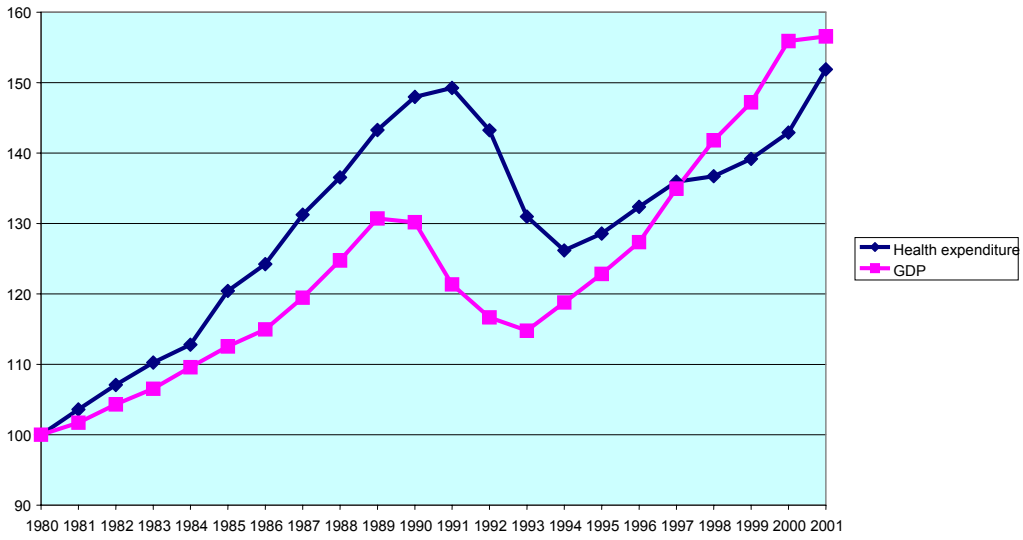

Figure 2. Per capita health care expenditure and GDP at constant prices in Finland 1980 – 2001, indices 1980=100

During the 1990s the changes in health care financing (Table 1) were mainly due to two factors, which were both attributable to the poor economic situation. First, the amount of state subsidies for municipal services fell, meaning that the municipalities assumed—in addition to increased freedom of choice regarding the provision of services—greater economic responsibilities for providing these services. Thus the share of health care financed by municipal taxes increased. One main reason for the decrease in the state subsidies was the steep increase in unemployment expenditure and the decrease in tax revenues in the state budget. This resulted in a large increase in net Government borrowing.

Table 1.Financing of health care in 1990-2002

	Share %												
	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
State	37.2	36.9	35.2	31.7	30.4	28.4	24.1	20.6	18.9	18.0	17.6	17.1	16.9
- direct taxes	14.1	11.2	7.6	5.5	5.8	5.5	7.5	7.7	7.2	7.0	8.2	7.4	7.4
- indirect taxes	22.1	18.1	15.0	11.3	11.8	12.5	11.4	11.5	11.0	11.0	9.4	9.7	9.5
- net borrowing	1.0	7.6	12.6	14.9	12.8	10.4	5.2	1.4	0.7				
Municipalities, direct taxes	35.8	35.7	33.3	32.2	31.9	33.8	37.8	41.2	42.5	42.4	42.2	43	43.3
National Health Insurance:	10.8	11.3	11.2	12.1	13.1	13.4	13.9	14.2	14.8	14.9	15.4	15.8	16.1
- empolyees	4.9	4.3	6.6	7.2	8.4	8.7	9.0	9.2	8.3	7.7	6.9	6.9	6.1
- empolyers	4.8	4.1	3.1	4.0	3.9	4.7	4.9	5.0	5.3	5.4	5.9	5.6	5.2
- state	1.1	2.9	1.4	0.9	0.8				1.2	1.8	2.6	3.3	4.9
Public finance, total	83.8	83.9	79.6	76.0	75.4	75.6	75.8	76.0	76.2	75.3	75.2	75.9	76.3
User charges	12.6	12.6	16.6	20.1	20.5	20.5	20.3	19.7	19.4	20.3	20.4	19.7	19.4
Other sources	3.6	3.5	3.7	3.9	4.1	3.9	3.9	4.3	4.4	4.4	4.4	4.4	4.3
Total	100	100	100	100	100	100	100	100	100	100	100	100	100

1) In the absence of earmarked taxes, state subsides, and social insurance contributions, the proportion of each revenue sources used to finance health care is not directly observable. They were estimated according to average proportions of each revenue source. For example, the share of direct taxes of the state financed health care contribution is based on state's budget share of direct taxes

Secondly, the share paid by households in financing health care increased from 13% to 20% between 1991 and 1993. The official reason given for the increase was that it encouraged a more effective allocation of service use and enabled an increase in public funding. The increase in cost sharing stemmed partly from the abolition of a tax deduction for medical expenses from income taxes in 1992 and partly from the increase of user charges at municipal health services in 1993.

Since 1990, the share of NHI in financing has increased from 11% to 16% mainly because of increasing reimbursements in medicines. The household's cost sharing in prescribed medicines reimbursed by the NHI has varied between 37 and 40% since 1980. Since growth in prescribed medicines has been very fast during the last decade, household's expenses that cover these medicines have also increased both absolutely and

relatively: the share of prescribed medicine expenses of all household's health care expenses was 20% in 1999 and has increased about 6 percentage points since 1990 [9].

An assessment of the distributional changes of Finnish health care financing can be made by looking at the progressivity of different sources of health care financing. Between 1990 and 1996 the Finnish health care system became slightly more regressive.[b] This was mainly because the share of the most regressive payment methods (user-charges) increased. In addition, there was also an overall trend of regressivity of all financing sources (direct and indirect taxes, social insurance contributions and user-charges). On the other hand, the change in financing from state taxes to municipal taxes did not decrease progressivity, since on the whole, municipal taxation has been somewhat more progressive than state taxation. The reason for this is that a considerable share of state revenues is based on regressive indirect taxes. Since 1996, the distributional changes can be assumed to be rather small. Although the state's direct share in financing has decreased, its total share has been fairly stable since 1998, because it is paying the increasing deficit of the NHI.

Resource allocation, incentives and appropriateness of care

Budget allocation

As stated earlier, the Finnish health care system consists of two parts with different financial mechanisms. Among municipally provided services there is no single fixed budget for health services. Instead, the allocation of resources is defined in budgets that are decided upon at three levels: central government, municipalities and producers (hospital districts).

At the first level, Parliament decides on the total amount of subsidies for health and social services. These subsidies are paid automatically to municipalities according to the capitation principle. The Finnish approach differs in that here the capitation is applied to a whole range of services, whereas in many other countries it is applied to more specific services. For health services, these subsidies are calculated according to certain criteria; during the period 1993–96 these included population, age structure, mortality (SMR for all ages), population density, land area and the financial capacity of the municipality. The archipelago and other remote area municipalities received a somewhat higher subsidy. The relevance of these criteria on how they describe the need for services has been examined, and new criteria were developed in 1996 [10]. Partly on the basis of study findings, new criteria were adopted from the beginning of 1997 onwards. These included population, age structure and an age-standardised index of invalidity pensions for persons under the age of 55.

In 2000, new criteria were developed for state subsidies for health and social services [11], but they were not implemented in practice. The current formula has aimed at being a very simple one, including only age structure and a single morbidity factor. This has frequently led politicians to discuss technical aspects such as what cost weight should be

given to different age groups or what the suitable indicator for describing need for health care should be. It has also directed public discussion (in Parliament, the Government, and the Ministry) away from topics concerning the setting of priorities in terms of the total amount of resources to be allocated to health care and other public services, as well as the relative weights to be given to different health services. A suggestion has been put forward for making more explicit the role of politicians and researchers in the regional allocation of resources [12].

In Finland as in other countries, the existing allocation formula is based on a mix of empirical studies and political judgements. The main equity aim of the formula used in the state subsidy system is to ensure that each municipality has an equal opportunity to allocate more resources to servicing population areas with greater needs and less to areas with fewer needs. In addition to the fact that the current formula is not consistent with the empirical research on need factors [12], there are also other factors associated with the prevailing budget system which run counter to the attainment of the equity objective mentioned above. Firstly, the state subsidy amounts on average to about 24% of municipal health expenditure, which means that in some municipalities the amount of subsidy is not sufficiently large to achieve equality [c]. Secondly, the amount of public funding allocated to health services via the NHI does not affect the size of municipalities' state subsidies. This creates inequalities for municipalities in the provision of more comprehensive services for their inhabitants as the use and supply of private health services—and thus also the reimbursements paid by the NHI—are not equally divided regionally (they are concentrated in urban areas).

Currently, the most important economic decisions in the health care system are made by the 444 municipalities, which annually decide on the amount to devote to health care as well as dividing the resources among different sectors within the area of health care. In these decisions, the role of state subsidies is fairly limited, since its share of total financing is rather low and also because central government has not used it as a means to implement its own priorities in resource allocation.

The fact that decentralisation of power from the state to the municipalities happened at a time of economic recession also greatly affected the allocation of resources. Under the former system, an annual increase in resources was in practice determined by the state budget, and this system functioned effectively (in terms of cost-containment) during a period of steady economic growth in the 1970s and 1980s [13]. This was politically convenient (for the Ministry, Government and Parliament), since it is always easy to make decisions involving increases in the availability and supply of services. One may also argue that without the reform of state subsidies and the deregulation of the system, a similar retrenchment would have been much more difficult to implement. It would have caused immense problems – both for the central government bureaucracy, for example in technical terms, and for the health minister in political terms. Certainly, the new incentives for savings and efficiency (because of the increased responsibility and accountability of financing services) at the local authority level have contributed to the exceptional trend in health expenditure.

There is no official budget for financing the National Health Insurance scheme. The level of employers' and insured persons (population) contributions are decided on annually by central government. The rapidly growing reimbursements for medicines have increased the NHI's deficit, which is paid by the state. The allocation of NHI resources to different

types of care, as well as their regional distribution, is based on the demand for services and on the reimbursement system, which is same uniformly across the country.

Payment of doctors

Most physicians and dentists working in the public sector draw monthly salaries, with little allowance for variations in performance. However, it should be noted that publicly employed physicians are also allowed to work in private practice. In these cases they are reimbursed on a fee-for service basis, and these fees are in turn partly reimbursed to the patients by the NHI.

One of the payment measures undertaken has been the introduction of the "personal doctor" system at some health centres in the 1980s. This was an initiative taken in some municipalities in order to improve access to health centre doctors and ensure continuity of care. In the new system the patient and his family were assigned to a physician who treated them on a permanent basis. This system was promoted by a new payment system in which a physician's total salary is a combination of basic salary (60%) capitation (20%) fee-for-service (15%) and local allowances (5%). Later, in the 1990s, the system was developed more in the direction of what was called "population responsibility", a model in which a team of doctors and nurses is responsible for the health care of a geographically specified population. In 1993 it was anticipated that the population -based system should be implemented in primary care in all parts of country by 1996 at the latest [6]. However, the popularity of the system increased only gradually: in 1991, 18% of the population had been assigned to a personal doctor; by 1996 this figure had risen to 40%, and by 2002 to 52%. In addition, there are local differences in payment systems for physicians. The reasons that many municipalities have not adopted the system—some having even cancelled it after implementation—have usually been purely financial: the direct costs per doctor for the municipality are much higher in the personal doctor system compared to a system where doctors are working on a pure salary basis.

The existence of the two-tier financing system, together with the current payment methods, actually restricts competition in doctors' services: most private-sector services are provided by the same doctors who are working during office hours at public hospitals. A municipality does not receive NHI reimbursement (and neither do patients) if the municipality buys/provides services for their residents from the private sector. The converse is also true: it is not possible to obtain reimbursement from the NHI for private patients (referred by a private doctor) for services bought from a municipally owned laboratory. In private laboratory tests, the reimbursement scheme has been very "liberal" (i.e. high basic tariff), guaranteeing considerable profits, and there is strong evidence that dual funding has generated considerable excess capacity in laboratory services [14].

In addition, the existence of the two-tier system may create difficulties in developing municipal health services. In public hospitals, the number of physicians is correlated with technical efficiency: doctors' shortage of time and difficulties in using it flexibly constitute an obstacle to increasing productivity [15]. During recent years it has also been difficult to attract physicians to primary health care.

Payment of hospitals

The reform of 1993 also presented hospitals with a new model requiring them to collect their revenues by invoicing the municipalities. As purchasers, municipalities negotiate the provision of services with their hospital district on an annual basis. Local politicians are involved on both sides of the purchaser–provider relationship: they are decision-makers on the elected municipal council and also in the hospital district and hospital administration.

In addition, within the field of specialised hospital care, the asymmetry of information between the providers (hospitals and hospital districts) and the buyers/financiers (municipalities) is substantial, particularly in the case of the small municipalities. The small municipalities are also economically weak in comparison to the large hospital district authorities. In addition, most of the 435 municipalities are too small to pool specialised health services, because of the associated financial risk [16] [17].

Only rarely is there a long-term incentive for a municipality to buy services from other hospital districts or a private hospital, because this would undermine the financial situation of its own local hospital. The health sector is also an important employer, and its employees generate income tax revenues for the "host municipalities" of the providers. Therefore some municipalities are willing to pay more for services provided by a hospital located in their municipality.

In the absence of nationally set guidelines, hospital districts determine the prices for their services, and the method by which services are defined and prices calculated varies from district to district [17]. The pricing of hospital services is in a continuous state of flux. Thus the opportunities for municipalities to compare prices are very limited. Competition is also restricted by the fact that a hospital district is a local monopoly in its area, since according to the law a municipality must be a member of a hospital district.

In hospital pricing there is trend away from the old bed-per-day price towards case-based prices. The main reason has been to make financing of hospital care between municipalities more equitable i.e. to better reflect the real cost of care given to patients. In 1993, for instance, 7% of Finnish hospitals invoiced hip replacement using case-based prices, whilst 64% had done so by 1998. The trend towards case-based prices has been similar for many other procedures, although it has been a little slower. In 1997, large southern hospital districts introduced the first hospital invoicing systems relying on DRG case-based pricing, and by 2000 most hospital districts had considered using DRGs for the pricing of their services [17].

It might be assumed that a change towards hospital pricing based more on the type of activity involved (rather than on the traditional bed-per-day price) would have effects on the volume of services as well as the length of stays, since they change producer incentives; such effects have already been observed in other countries (such as the USA and Sweden). However, a recent study [17] on the effects of case-based pricing in three common surgical procedures using panel data from 1991–98 did not find clear evidence for this hypothesis: The use of case-based pricing increased the number of lumbar discectomies by 8% and decreased lengths of stay for hip and knee replacements by about 0.5 days. On the other hand, case-based pricing did not increase the volume of hip and

knee replacements and did not decrease lengths of stay in the case of lumbar discectomies. Although the study considered only three procedures, the results indicate that reformed hospital financing methods do not necessarily promote more efficient resource allocation, since case-based pricing does not materially increase the number of hip and knee replacements, which are generally considered cost-effective. And case-based pricing has directed scarce resources towards increasing the number of lumbar discectomies, where cost-effectiveness is suspect.

The development of many measures of output per capita indicates an increase in productivity[d] between 1990 and 1996. For example, DRG-weighted admissions increased by 17% and the number of outpatient visits for somatic care increased by 36% at the same time as the real costs of these services were decreasing. Specific studies concerning the improvement of productivity at health centres and acute somatic hospitals confirm the trend in the development of outputs and costs.

Among health centres, there was a substantial decline in productivity from 1988 to 1990 and a clear increase during the period 1991–95 [18]. Thus the upturn in productivity occurred at the same time as the municipalities suffered financial problems due to the recession as well as the change in financial incentives. The same trend was also found in a study on hospital productivity during the period 1988–94: there was a significant increase in productivity during the years 1991–94. However, in this case, much of the observed increase in productivity was due to advances such as the introduction of day surgery and other new technologies that decrease the average length of stay. In addition, the greatest increase in productivity occurred at the beginning of 1990s; i.e., during the years when the hospital funding, pricing and incentive systems remained largely unchanged [19].

The latest studies during the late 1990s and the early part of the current decade (i.e. at a time of increasing funding) indicate a decreasing trend in productivity both among health centres and in acute somatic hospital care [20] [21]. Thus it seems that changes in productivity in Finland are more closely associated with direct economic constraints (affecting municipalities) than with changes in incentive (financial) structures. It should be taken into account that the pricing system for hospitals and health centres has always focussed more on dividing the cost of providing services equally between the municipalities than on promoting efficiency.

Appropriateness of care

Until 1992, personnel decisions in the municipal health services were regulated jointly by the central government (former National Board of Health) and Provincial State Offices. If a hospital district employed any new personnel who were not approved in its plan as accepted by the Provincial Board, it did not receive state subsidies for the posts and had to acquire from its "client" municipalities the financing for all costs incurred. Since the 1993 reform, personnel decisions are no longer regulated by central government: they are solely the responsibility of the health centres or hospital districts. The central government still controls enrolees in health care education and training.

It has been generally considered in Finland that the high standard of education and training for doctors, nurses and other personnel is an important means of guaranteeing the quality of services. This standard is assured by a certification system for the health professions. Certification, admission to and control of the professions is the duty of a specific agency (National Authority for Medicolegal Affairs). In addition, provincial state offices have some responsibility for controlling both public and private health services. However, the quality and appropriateness of services is not defined or controlled in detail by legal or other means. Instead, national non-binding recommendations have been developed. For example, national guidelines on quality assurance in social welfare and health care were published in 1995 and 1999. Similarly, quality recommendations have been published for elderly care and mental health services. FinOHTA (the Finnish Office for Health Care Technologies) has produced information on choices in cost-effectiveness technologies in health care. In addition, clinical guidelines have been developed on a voluntary basis by professional associations, and providers have been eager to demonstrate their quality through certifications given by private consulting firms.

Structural change, access and outcomes

Structural change

As stated earlier, one of the major aims of health care has been to achieve a change in the balance of health care by transferring resources from institutional and specialised care to outpatient services and primary care. Between 1980 and 2000, the share of expenditure devoted to inpatient care decreased from 49% to 40%, and the share of specialist and primary health outpatient care increased from 15% to 20%

A closer analysis of trends in heath care expenditure in the 1990s indicates that expenditure decreased most significantly in primary care, where in 2000 the per capita expenditure was still over 20% lower than 10 years earlier. In addition, in private care (physician services) and in public specialist care as a whole, the level in 2000 was still somewhat below the level of 1990. In the case of specialist care it should be noted that the figures also include psychiatric costs and that reductions are mainly due to closures of psychiatric beds. If this is taken into account, the per capita cost of somatic specialist care (at constant prices) has actually increased somewhat since 1990. Thus municipalities as buyers of somatic specialist care could not contain these costs (as opposed to the cost of primary health care that they themselves provide) as was targeted in public documents in the 1990s.

In 2000, the total number of personnel working in municipal health services (both health centres and specialist care) was still about 4% smaller per capita than in 1991. However, there have been quite remarkable structural changes: the proportion of doctors, nurses and other specialised personnel has increased, whereas the share of other personnel (mostly less well-trained or not qualified) has decreased. As a matter of fact, the total number of

doctors, nurses, and specialised personnel was somewhat more than 20% higher in 2000 than in 1990.

There are differences in trends between primary and specialist health care. The total number of personnel in primary care increased considerably in the first years of the 1990s, and there was even an increase in the first year of the economic recession. The decrease here occurred between 1993 and 1994.

In the field of specialised care, the number of other (less well-trained) personnel has continually decreased, and there was a considerable increase in the numbers of nurses and doctors in the late 1990s. This meant that in 2000 about 65% of all doctors and nurses working in municipal health services were in specialist care, which is about 5 percentage points more than in 1992, before the reform. However, no differences in the doctor/nurse ratio have occurred.

There is some evidence that the regional differences in health care utilisation and per capita expenditure in municipal health services have not increased since the reform. At least in the case of health expenditure, a contrary trend—a decrease in variation—has actually occurred [22]. The reduction in health expenditure between 1990 and 1996 tended to be larger in those municipalities for which central government matching grants had been the most generous before the 1993 reform [23].

User charges

The increase in user charges to patients might be assumed to increase socio-economic inequity in use, since it increases the effects of income as an explanatory factor in the utilisation of services. In addition, rising unemployment might be assumed to decrease utilisation by low-income groups, since becoming unemployed terminates one's use of easily accessible occupational health services provided by employers.

However, recent Finnish studies [2, 24] on health care utilisation indicate that the changes in health care have not significantly affected socio-economic inequity. With respect to the total use of physician services, income-related inequity was prevalent in Finland between 1987 and 2000/01[e] (Figure 3). The degree of inequity is not very high: the value of concentration indices of total utilisation is about 0.05, which means that about 3–4% of the total number of visits need to be redistributed from the richer half of the population to the poorer half in order to achieve equity. However, the results of a recent OECD study indicate that income-related inequity in visits to a doctor is greater in Finland than in many OECD countries [25].

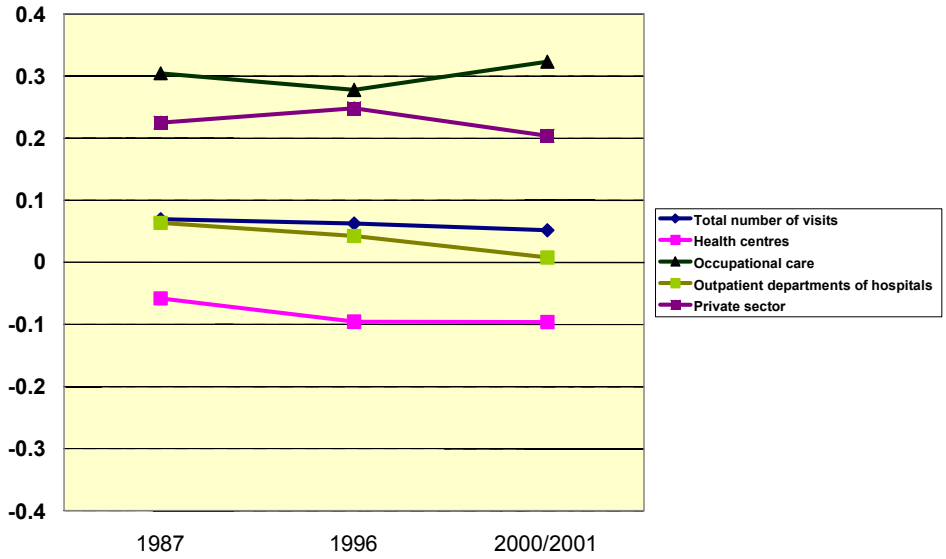

Figure 3. Inequity indices (HI) for visits to a doctor by sector 1987-2000/2001 (for method see van Doorslaer et al.2000, OECD 2003)

There have not been any changes in the inequity of physician visits by sector with respect to need (Figure 3). Outpatient visits to health centres followed a pro-poor distribution, public specialist visits were in line with need as between income groups, while private doctors' services and occupational care were concentrated among the high-income groups.

A somewhat different trend can be found in the use of hospital care. According to a recent study [24], the earlier general tendency in the late 1980s for high-income groups to receive more surgical care than the worse-off with poorer health status seemed to have become more systematic and pronounced in 1996, despite the considerable increase in the supply of surgical procedures. The studies indicate that although the Finnish health care system met the challenges of the 1991–94 recession fairly well, inequity in utilisation still prevails and can be partly explained by specific factors that increase inequity – such as the special payment category in hospital care, occupational health care, and private services partly reimbursed by the NHI.

Waiting times

During the 1980s and 1990s a long waiting time was not considered a general problem in health care, with the exception of waiting times for bypass surgery. Partly because of the long waiting time for this procedure in the late 1980s, the development of cardiac surgery was accorded high political priority. The investment decisions that enabled a growth in the numbers of procedures and a clear decrease in waiting time in the 1990s were actually made back in the late 1980s, when the planning of new operating theatres and catheterisation laboratories began and staff were recruited.

At the beginning of the present decade, the specific problems of health care systems have emerged in the public debate to a much greater extent than in the 1990s, when the political and public discussion was focussed more on the role of the national government and the municipalities in the production and financing of all public services (not only health care). The trend towards longer waiting times was one of the factors that promoted the debate. One reason for this was an extraordinarily long strike by physicians in 2001, an action which temporarily increased waiting times. In September 2001 the Government established a national project to secure the future of health care. So far, the most important consequence of the project has been that in 2003 the Government gave extra earmarked funding to municipalities and hospital districts in order to reduce the number of patients on waiting lists and to shorten waiting times. A notable problem, however, is the fact that many hospitals do not have data on waiting times and that, where such data is available, its quality (in terms of clear definitions of waiting start times as well as comparable clinical criteria) is questionable. Thus, it is almost impossible to evaluate the effects of the additional funding in reducing waiting times by using the available data.

Outcomes

The stated long-term objectives of Finnish health policy have always been to achieve the best possible health for citizens and to reduce disparities in the health of different social groups. At the macro level it is very difficult to analyse the effects of health policy, particularly since the role of health care in ensuring the health of the population cannot easily be distinguished from the effects of other factors affecting health. But in any case, life expectancy at birth rose significantly during the period 1981–2000. Among females it increased from 78.4 to 81.0 years and among males from 70.1 to 74.1 years.

Although overall mortality has fallen, the effect of socio-economic inequality seems to be increasing. The differences in mortality are highest in the 30–40 age group. In the period 1981–85, life expectancy at age 35 was 4.7 years longer among males with higher education and 2.7 years longer for females in this group than were the corresponding figures for the group which had experienced only basic-level education. In the years 1991–96, the corresponding difference was 5.8 among males and 3.2 among females. The increase in socio-economic inequity can also be seen when socio-economic status is analysed using other measures, such as employment status [26, 27].

The socioeconomic differences in mortality prevail for almost all causes of death. The differences in mortality are highest for violence, respiratory disorders, diseases associated with high alcohol consumption and, among men, lung cancer. However, since circulatory disorders play such a large role in mortality, the socio-economic differences in mortality due to such disorders also constitute the main explanation for overall socio-economic inequity in mortality. The reasons for the increase in the socio-economic differences in mortality are a product of many factors. According to an analysis of the trends of mortality by disease categories, the most important reason for increase in socioeconomic inequity appears to be that developments in the trend of mortality of circulatory disorders

as well as diseases related to alcohol consumption have been more favourable for higher socio-economic groups [27].

Many of the differences between socio-economic groups are associated with differences in lifestyles such as smoking, alcohol consumption and diet. There is some indication that socio-economic differences are to some extent due to health services: for example, a study showed that the adjusted rates for coronary artery bypass grafting were much higher for a white-collar group than a blue-collar group, despite the much higher prevalence of the associated disease in the blue-collar group [28]. The treatment of acute myocardial infarction is also more intensive among high-income groups than low-income groups [29].

In Finland we do not have data on the development of health-related quality of life as measured by a validated generic measure. On the basis of population surveys, different crude measures of health give somewhat different results. If one considers self-reported chronic disease and psychosomatic complaints, the health status of Finns seems to have deteriorated between the years 1987 and 1995/96, whereas self-rated health status and measures of activities of daily living indicate an increase in health status [30]. In addition, socio-economic inequity with respect to income and education also show a different development when analysed using different health measures (Table 2). According to Table 2, inequity is highest among adults aged under 65. When self-rated chronic disease is used as a measure of morbidity, inequity with respect to income decreased to a statistically significant extent between the years 1987 and 1995/96. However, when inequity is evaluated with respect to self-rated health, there seems to be a contrary trend, although it is not statistically significant.

Table 2. Prevalence of long-standing and self-rated health and their age and sex-standardised concentration indices[1] according to family income and education among Finnish non-institutionalised population (Source Häkkinen 1999).

Age group	**Long-standing disease**								**Self-rated health**							
	prevalence (%)		**Concentration index**						**per cent of reporting good or rather good health**		**Concentration index[2]**					
			income			education					income			education		
	1987	**1995/96**	**1987**	**1995/96**	**change[3]**	**1987**	**1995/96**	**change[3]**	**1987**	**1995/96**	**1987**	**1995/96**	**change[3]**	**1987**	**1995/96**	**change[3]**
Children aged 0-18	13.2	22.4	0.003	0.024	-0.020	-	-	-	-	-	-	-	-	-	-	-
Adults aged 18-64	35.7	43.9	-0.083***	-0.047***	-0.036***	-0.80***	-0.076***	-0.004	70.4	73.4	-0.080	-0.100***	0.01	-0.100	-0.120	0.02
Adults over 64	81.7	83.2	-0.017**	-0.022***	0.005	-0.013*	-0.016**	0.002	27.7	31.2	-0.032*	-0.066***	0.035	-0.046***	-0.061**	0.015
Adults over 18, total	42.3	50.5	-0.064***	-0.039***	-0.025**	-0.061***	0.056***	-0.005	64.4	66.3	-0.063***	-0.080***	0.016	-0.080***	-0.093***	0.013

1) See Kakwani et al. 1997
2) Calculated using latent self-rated ill-health variable with standard log normal distribution (see van Doorslaer et al. 1997)
3) The index in 1987 minus the index in 1995/1996. The significance of differences between the indices were measured with t-test

The future

Most of the largest political parties, the Government and the Ministry of Social Affairs and Health agree with the basic structure of Finnish health care, including taxation as the major source of financing and the public sector taking the main responsibility for the provision of services. The general public is fairly content with the system: according to Eurobarometer surveys covering the years 1996 to 2002, over 70% of Finns were satisfied with their health care system; these were among the highest figures in all European Union countries. In addition, it seems that Finns value public health services more highly than other public services [31].

In spite of this consensus, it can be observed that specific aspects related to the system—such as the role of municipalities, hospital districts, politicians and the private sector, as well as problems associated with the existence of several uncoordinated public funds [13]—are topics for increasing debate. It is certain that in future, there will be a need to take more carefully into account the rather unusual incentives (related to the specific aspects), both economic and of other types, affecting the behaviour of political decision-makers, providers and patients.

Outcome measurement

The outcome measurement of health services is not very well developed in Finland. It started on a voluntary basis, initiated by researchers [32, 33]. The incentives for outcome measurement have been low. In the field of municipal health services, patients' opportunities to choose a producer are restricted. In addition, for the final funding bodies (municipalities), financial questions seem to be much more important than the outcomes of services. Proper outcome measurement requires the co-ordinated, long-term development of methods and data collection, and this has not been a priority for municipal decision-makers – and not even for the Ministry of Social Affairs and Health.

Capitation

As explained earlier, the Finnish health care system is funded from several sources, and the capitation principle is used only in the case of municipal allocations of state subsidies. The capitation formula is based to a large extent on political judgement and does not take into account other sources of public funding and neither does it direct the politicians to discuss the basic questions in resource allocation. There are currently suggestions that the capitation principle should be used as a method for payments by municipalities in some local experiments in which a hospital district or local hospital is to take responsibility for the provision of a whole range of health services.

Mixed payment system

During the last few years, the shortage of physicians at public health centres and hospitals has been increasing; the cause has been dissatisfaction with working conditions and salaries in the public sector, and not so much due to an inadequate supply. At many health centres and hospitals, a consequence of this is that emergency services (physician services) are now produced by private firms, which are paid on an hourly basis. This may be a more expensive way to arrange services and may create problems in the continuity of care, especially in those areas where an emergency service is used as an alternative to regular visits because of long waiting times (in turn caused by a shortage of doctors). Solutions to the shortage of doctors in municipally provided health services would require an analysis of the payment system for doctors as a whole (including reimbursements from the NHI), and such solutions cannot be achieved without taking into account the unusual incentives associated with the dual nature of public financing. Of course, non-economic questions such as models related to administration, organisation, and job description and satisfaction should also be discussed since they are also important factors affecting a doctor's choice of workplace.

Product definition

The pricing of hospital services is undergoing a continuous process of change in the direction of case-based prices (DRGs). It is obvious that the introduction of a DRG-based pricing system could lead to several improvements, such as greater transparency and more accurate cost information. So far, however, the development of the pricing system has occurred locally—at hospital district level—without any national guidelines. It can be argued that an increase in transparency and the comparability of costs will require a more active role on the part of the central government in developing pricing rules (such as DRGs in hospital care and RUG (Resource utilisation Groups) in the care for the elderly).

This is also important because private and non-profit—and even multinational—firms are entering the health care market. However, given the current structure of the Finnish health care system, the development of a pricing system can be seen as a technical question, and a greater amount of time should be devoted to more general questions, such as the development of contracts between municipalities and hospitals; this field also includes other aspects, such as the management and control of care chains (total episodes of care), the quality of services, and consideration of the financial risk for small municipalities [34].

Institutional background

Since the 1970s, Finnish municipal social and health services have been developed by prioritising different sectors in different years. However, it is typical that each individual expansion and change has been made without any consideration to its overall effects and especially of what kind of economic incentives each individual reform would create. The phenomenon can be partly explained by institutional factors [35], and this means that the role of rational or evidence-based arguments has been limited in the formulation of policy.

The tradition of strong but small local authorities and the lack of legitimate democratic regional authorities (such as those existing in other Nordic Countries) explain the particular path followed by Finnish reforms [35]. In legal terms, public responsibility for health care has been delegated to smaller units than in any other OECD country. At the same time, the Finnish tradition of consensus, both between the municipalities themselves and between the central government and the municipalities, seems to provide a context in which even radical decentralisation may not lead to radical changes in the health care provision system. Local (municipal) political decision-makers do not voluntarily want to give up power to some regional authority, an action which in many ways would provide a better opportunity to co-ordinate the delivery of services and to create the kind of incentive structures that encourage efficient practices.

In addition, the particular Finnish mixture of dominant Beveridgean and marginal Bismarckian models creates an extremely unusual institutional context for policies involving contracting-out and privatisation. The current NHI scheme was created in the mid-1960s; i.e., before priority was given to the development of municipal health services. At that time there was no need to consider the problems of the two-tier funding system or the relationship between public and private services. In this respect the situation has changed, particularly since the implementation of the state subsidy reform, which included opportunities to integrate competitive elements into the production of municipal services. It can be argued that the two-channel system has reduced pressures and temptations to contract-out tax-funded health care. At the same time, funding private providers from public health insurance and public providers from tax revenue does not create competition between the different providers, and consequently it provides no incentive for efficiency gains, while at the same time it creates further scope for inequity between individuals. The continuing existence of the two-tier system may again be explained by an institutional argument: each tier has significant beneficiaries both among health care users and providers whilst relatively few would benefit immediately from a radical reform of the system.

However, the future developments of health services and increasing ageing of the population will strengthen the problems associated the two tier-system. Municipalities (public hospitals and nursing homes) pay for the drug expenditures of in-patient care, while in outpatient care, both the patients and the NHI contribute to the expenditure. The expenditure on outpatient pharmaceuticals has increased more rapidly during recent years than other health expenditure and are likely to increase further in the future. The budget for the NHI is open ended while municipalities' budgets are constrained. Thus in the present system, municipalities have incentives to find those care alternatives which shifts financing to others (e.g. drugs covered by NHI) although the alternative will be against

patients, needs, total cost or effectiveness of services. On the other hand, many new and expensive outpatient drugs (e.g. in cancer care) are not covered by the NHI, but are provided by hospitals and thus financed by municipalities. This creates unnecessary use of hospital care by patients in order to get medication. Moreover, the development of new care models which substitute hospital or nursing home care and are provided by the private sector emphasis the significant perverse economic incentives associated two-tier financing system.

Notes

a) The difference in cost sharing between private services covered by the NHI and municipal services varies between service items but on average, the user-charges share of financing is 60% in the private sector (doctor and dentists services and examinations and treatments) and about 10% in municipal services.

b) Kakwani indices of total financing changed from 0.018 to 0.035 according to the definitions applied in an international comparison [36]).

c) In order to achieve equality in the current financing structure, the state should thus also take some money away from the richest and healthiest municipalities and redistribute it to the poorest and least healthy municipalities.

d) Productivity means here the ratio of outputs to inputs, where outputs are measured in terms of output indicators or intermediate outputs such as discharges, visits, bed-days, procedures etc.

e) In Figure 3 the income-related horizontal inequity (HI) is measured by means of a concentration index which is standardised by age, sex, self-rated health and a measure of chronic morbidity using methods applied in international comparisons [37] [25] .

f) There is, of source, no well-documented scientific evidence for this although many consultant reports indicate this indirectly (e.g. [Pekurinen, 2003 #56 p 22]: An exception for this is a large reorganisation of patterns in one hospital district starting in the beginning of 2005. In this case the local decision-makers are giving their power to a regional organisation in a wide range of health, social and schooling services. However, this was achieved by means of considerable support (in terms of extra money, new legislation) from general government.

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